

## PREFACE

National Centre for Catalysis Research (NCCR) at the Indian Institute of Technology, Madras has been bringing out a few of the e-books specifically meant (for example Energy sources, synthetic strategies and others) for educational purpose aimed at the audience of school children. In this direction, it was considered that a simple and easy to follow text book on perovskite materials (the materials that have received considerable attention of the scientific world in recent times especially from the point of view of device (especially solar cell) application) would be useful for the younger generation so that they can make more innovative applications of this wonderful solid state material.

It has been realized that the vast amount of information available on this solid-state material cannot be contained in a single text book and hence this compilation can not be considered to be comprehensive one on this subject. In order to keep the subject matter simple, it is attempted in this compilation to deal with certain specific aspects like the structural aspects of these materials and the factors controlling the crystallization in perovskite structure and also to give a flavor of the recent developments in this field a chapter on Hybrid organic Inorganic perovskites (HOIPs) has been included in this short monograph.

The motivation and enthusiasm shown by the members of NCCR (especially Mr. Suryakumar, Hariprasad narayanan and Dr.Sudhakar) in attempting this compilation deserve special mention and we are grateful to them. As stated above, this compilation is only meant as a learning resource and hence it is kept to the minimum size and the contents have been carefully chosen so that even a high school student can easily follow and use it as a knowledge source.

The members of NCCR are aware of the limitations and shortcomings involved in such an endeavor. We will be ever grateful to any of the suggestions to improve our efforts. The feedback in any form will be the cornerstone for our future such efforts.

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